

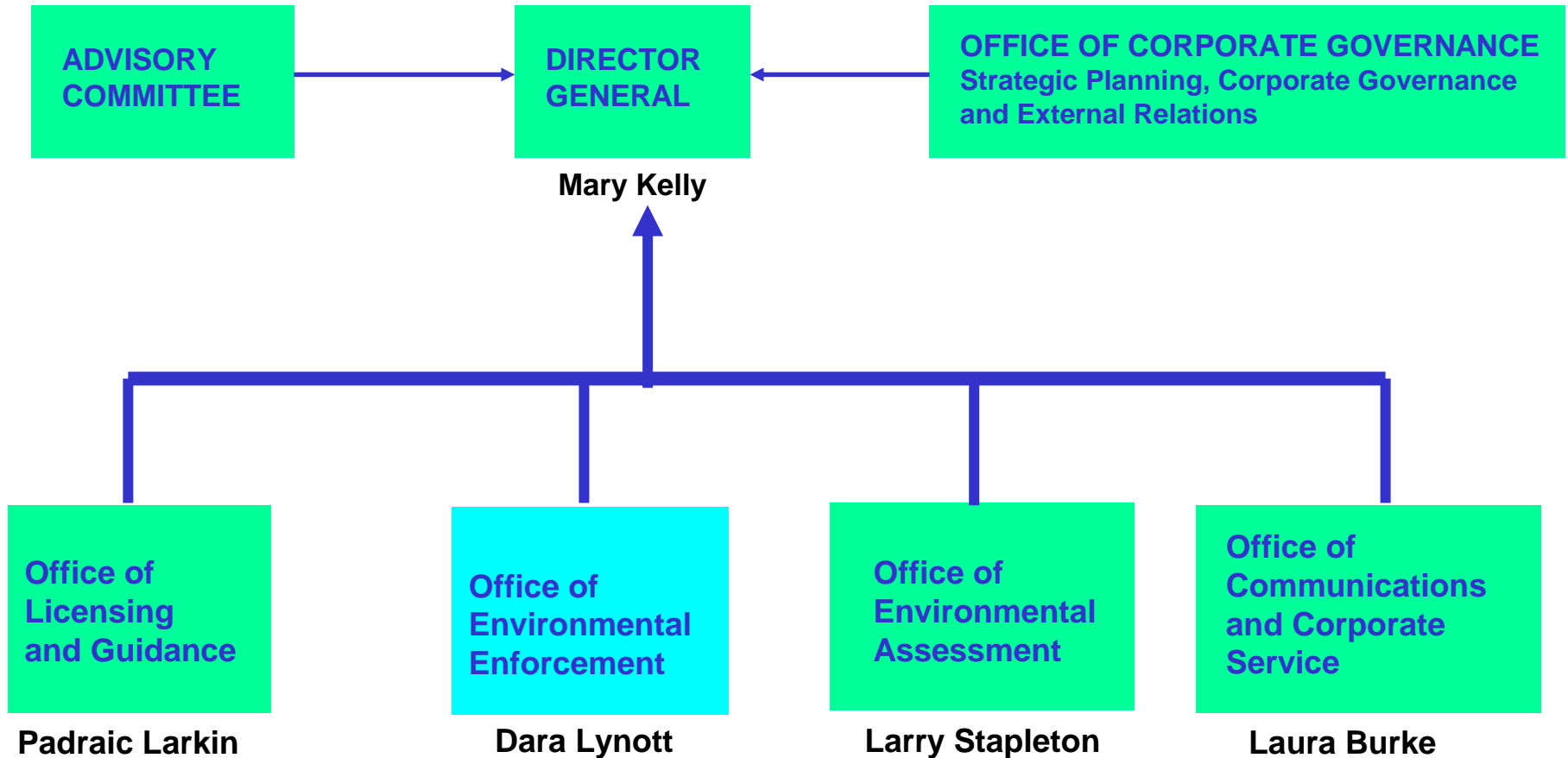


## Role of Composting and Anaerobic Digestion in Sustainable Development

Dr. Padraic Larkin, EPA



# Organisational Structure



# Contents

- ✓ The waste challenge
- ✓ Environment and Public Health
- ✓ Role of Composting
- ✓ Odour
- ✓ Bioaerosols
- ✓ Third Party participation in Licensing
- ✓ Anaerobic Digestion

# Waste Management Act

- Section 40(4)

The Agency shall not grant a waste licence unless it is satisfied that .....the activity concerned, carried on in accordance with such conditions as may be attached to the licence, will not cause environmental pollution.

Environmental pollution is defined  
in Section 5(1) as follows;

**environmental pollution** means, in  
relation to waste, the holding, transport,  
recovery or disposal of waste in a manner  
which would, to a significant extent,  
endanger human health or harm the  
environment.....

Consequently where the Agency grants a licence for a waste facility it is satisfied that the facility will not endanger human health.

# World Health Organisation's Air Quality Guidelines for Europe

- ✓ the primary aim of these guidelines is to provide a basis for protecting public health from adverse effects of air pollution and for eliminating, or reducing to a minimum, those contaminants of air that are known or likely to be hazardous to human health and wellbeing.

# Millennium Ecosystems Assessment

- ✓ 60% of the ecosystem services that support life on Earth are being degraded or used unsustainably.
- ✓ ongoing degradation of 15 of the 24 ecosystem services examined is increasing the likelihood of potentially abrupt changes that will seriously affect human well-being.

## 2003 data

- ✓ An estimated 1,683,477 tonnes of biodegradable municipal waste were generated in Ireland in 2003, of which 1,145,533 tonnes were consigned to landfill and 537,944 tonnes were recycled

# Irish Independent

## Locals seeking health audit over composting stink

A RURAL Tipperary community enduring an "intolerable odour" from a composting company has called for a health audit to determine the impact on humans. Angry residents of Rathcabbin on the Tipperary/Galway/Offaly border yesterday took their grievance over the Shannon Vermicomposting plant to the door of the Health Services Executive for the Mid-West area, and staged a 90-minute protest outside the Executive's regional headquarters in Limerick

Accompanied by MEP Kathy Sinnott , the residents handed in an official letter of complaint to Director of Public Health Dr Kevin Kelleher, requesting that tests be carried out that, they claim, will back-up anecdotal evidence in the area of the fall-out from the presence of the company.

Publication: Meath Chronicle

Date: Saturday, April 23, 2005

Page: 8

Extract: 1 of 1

Circulation: 17.990

Author:

Headline: Wilkinstown group takes Organic Gold battle to Brussels



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# Wilkinstown group takes Organic Gold battle to Brussels

Locals complain county council has  
done nothing to alleviate bad smell

Publication: Fingal Independent

Date: Friday, February 18, 2005

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Circulation: 5,755

Author: BY EIMEAR COTTER

Headline: Residents concerned about 'dangerous emissions' at Kilshane



## Residents concerned about 'dangerous emissions' at Kilshane

**BY EIMEAR COTTER**

RESIDENTS in a rural part of Fingal have questioned a proposed Recycling Park which Fingal County Council plans to build at Kilshane Cross, expressing concern about possible smells and dangerous emissions.

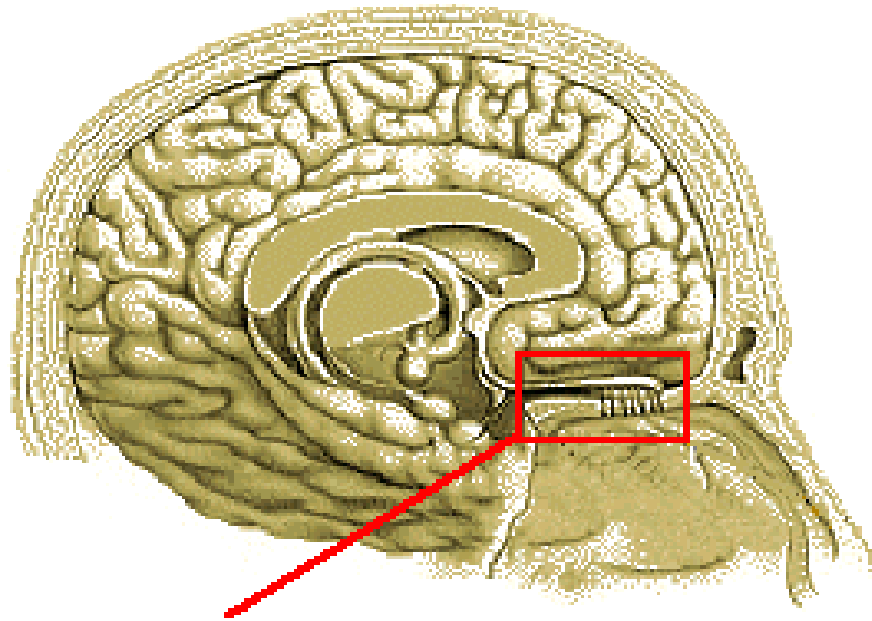
welcome.

The council proposes to build an integrated recycling facility consisting of a Biological Treatment Facility/Composting Plant, recycling facility for construction and demolition (c&d) waste, sludge hub centre and municipal waste transfer station at

In years to come, Fingal householders will have three bins, a grey bin for waste, a green bin for recyclable materials and a brown bin for biodegradable materials, such as garden and food waste.

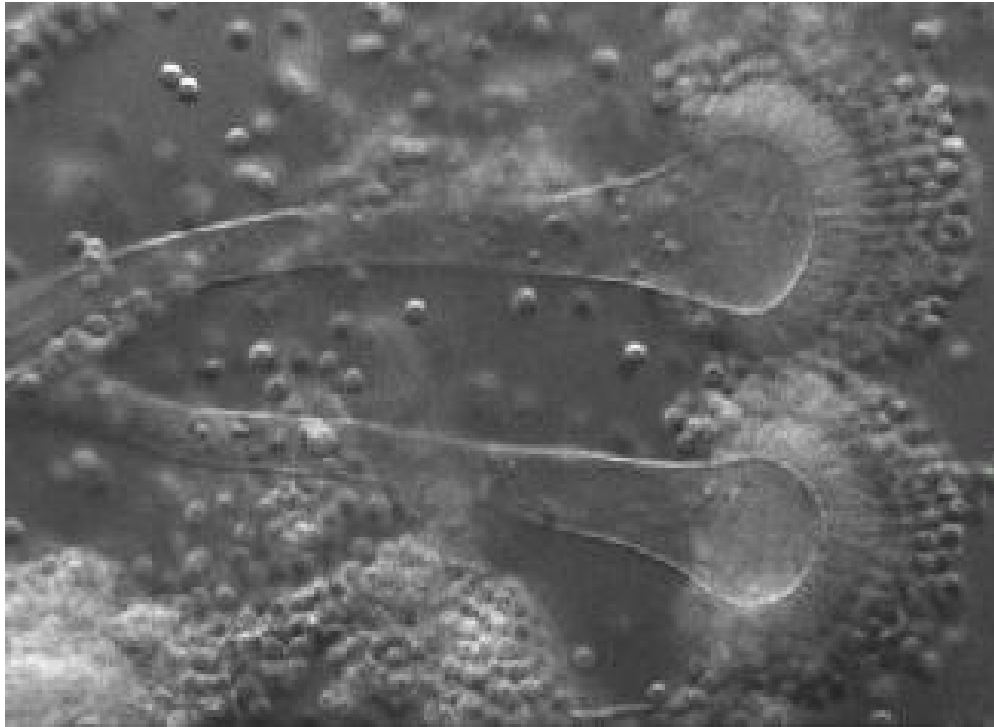
'We can't distribute the brown bins until we can compost the

# Odour and Nuisance



**Olfactory Region (*Regio olfactoria*)**

# Bioaerosols



# Third Party Submissions

- ✓ There are six members in our family and every day of our lives we live with a vile smell to such an extent that we are unable to live a normal life.
- ✓ The market value of our property has been greatly reduced by this constant problem and we don't have a choice as we are not in a financial position to move from the area

# Third Party Submissions

- ✓ The quality of our lives and that of our family is severely affected in the following manner:-
  - we cannot open windows, doors or vents in our house
  - we cannot hang out our washing
  - we cannot use our garden for recreation or leisure
  - the use of our home is limited
  - our moods and emotional well being are affected; we are embarrassed, we have to try and live with the smell and noise on a daily basis

# Licence Condition

- ✓ The licensee shall ensure that the activities shall be carried out in a manner such that emissions including odours do not result in significant impairment of, and/or significant interference with amenities or the environment beyond the facility boundary.

# Anaerobic Digestion

- ✓ Reduction in odour,
- ✓ Reduction in pathogen count,
- ✓ Reduced water pollution potential,
- ✓ Much improved availability of Nitrogenous fertiliser value,

# Anaerobic Digestion

- ✓ Possibility to transfer Phosphorus to a solid post digestion that can then be transported to tillage areas or is ideal for composting,
- ✓ Reduced greenhouse gas emissions due to replacement of fossil fuels – also a revenue stream,
- ✓ Reliable supply of renewable electricity and heat.

# Challenge

- ✓ Composting industry must recognise their responsibility to the environment and realise that good environmental management is, in fact, good business management.